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FINAL REPORT

Mountain Pine Beetle Control Project

Targhee National Forest

Fall-Winter, 1964-65

Prepared By: John Jay Michelot — Forest Insect Control Officer — 3-8-65 — **Date**

Approved By: D B Jasek — Timber Staff Officer — 3/16/65 — **Date**

FINAL REPORT
Mountain Pine Beetle Control Project
Targhee National Forest
Fall-Winter, 1964-65

I. Introduction

The master insect control plan for the Targhee National Forest mountain pine beetle control project for fall 1964 - spring 1965 was completed on August 21, 1964 and approved August 31, 1964. On the basis of this plan, an aerial reconnaissance was made August 24-27 of the entire forest and suspected insect areas plotted on a forest map.

By September 1, plans for intensive ground surveys were completed. Forest funds were not sufficient to make an intensive survey and additional financing was requested from the Regional Forester. This request was denied and an extensive survey was started on September 15. After several discussions with Regional Office personnel, additional funds were made available. These funds made it possible to complete the surveys as originally planned. Since there was a delay in receiving funds for the surveys, they were not completed until October 26. This was eleven days later than the completion date originally planned.

A meeting with District Rangers and other project personnel was held on October 26 and plans made for fall treating projects. A project proposal was prepared and additional funds requested from the Regional Forester on October 27.for fall suppression projects.

Survey results indicated that there were 183,000 trees on 87,000 acres of National Forest and adjacent lands which were infested with mountain pine beetle*. Recognizing that a project of this size would be very difficult to complete in the spring of 1965, it was decided to accomplish as much as possible during the fall and winter of 1964-65. The following is a summary of planned fall work.

District	Force Account Treat	Contract Treat	Force Account Fall and Burn	Force Account Prespot
Island Park	2,000 T			5,830 A
Porcupine		450 T		1,000 A
Teton Basin	1,555 T		7,500 T	2,600 A

Ashton - Cruise and prepare Jackson Mill Springs timber sale for insect control.

Rexburg - Clean up clearing debris on Canyon-Calamity Insect Control Access Road.

The supplemental funds requested from the Regional Forester were not received until November 30. However, work was started on a limited scale by November 6 with forest insect control funds remaining after surveys were completed. A small chemical treating contract was let for the Middle

*Exclusive of Rexburg District.

Boone Creek project on the Porcupine District. This was completed on November 23. The other planned projects were started, keeping within available funds. As soon as additional funds were allotted, these projects were fully manned. By this time, however, adverse weather conditions had set in and progress was seriously affected.

The force account chemical treating proceeded according to plan on hot spot and high value areas. Areas planned for prespotting were not completed due to snow and poor access. The fall and burn project accomplished very little for the same reasons. Also, the area which was planned for fall and burn did not prove to have the concentrations of infested trees indicated by the surveys. This resulted in too much time being spent looking for trees. Costs for this project were excessive and it was terminated after two weeks of operation. All insect control activities were halted by January 15, 1965, and a meeting was held at the Supervisor's Office on January 8 to start planning for spring 1965 insect control projects.

The following is a summary of accomplishments for the fall 1964 Targhee insect control projects:

	Planned	Accomplished
Force Account Chemical Treat -	3,955 T	2,241 T
Contract Chemical Treat -	450 T	546 T
Force Account Fall and Burn -	7,500 T	192 T
Force Account Prespot -	9,430 A	6,996 A

The Canyon-Calamity road cleanup project is 60 percent complete.

The Jackson Mill Springs sale cruise is complete, appraisal is being worked up as of the date of this report, and the sale will be advertised by March 31, 1965.

Field inspections of the projects by the Insect Control Staff Officer were as follows:

Date	Location	Inspector
September 8	Ashton, Porcupine, and Island Park Districts	Kincheloe
September 14	Rexburg District	Kincheloe
September 22	Spencer District	Kincheloe
September 23	Rexburg District	Kincheloe
September 24	Porcupine District	Kincheloe
September 25	Island Park District	Kincheloe
September 29	Teton Basin District	Kincheloe
October 7	Ashton District	Kincheloe
October 14	Spencer District	Kincheloe
October 16	Porcupine District	Kincheloe
November 2	Porcupine District	Kincheloe

Inspections, Continued:

Date	Location	Inspector
November 16	Porcupine District	Kincheloe
November 20	Teton Basin District	Kincheloe
November 24	Porcupine District	Kincheloe
December 1	Rexburg District	Kincheloe
December 2	Teton Basin District	Kincheloe
December 4	Island Park District	Kincheloe
December 11	Teton Basin District	Kincheloe
December 21	Teton Basin District	Kincheloe

The force account chemical treating projects did not treat as many trees as planned for two reasons. The actual numbers of trees found on the various areas were less than surveys indicated. Deep snow and adverse weather necessitated halting the work on both the Island Park and Teton Basin Districts. Although the crews were not able to complete the entire project, they covered 143 percent of the planned area. There are only a few remaining trees on these areas to be treated.

Prespotting work progressed satisfactorily. It was halted only when deep snow slowed the work to the point where costs would have become excessive. Costs actually were higher than the spring 1964 project. It is felt that had we been given the funds earlier in the season before access became so difficult, we could have done the job for less than the forest average.

The fall and burn project did not produce satisfactory results. Snow and adverse weather, poor access, inexperienced crews, scattered infested trees, and other factors caused excessive costs per tree. Had it been possible to start the project earlier in the season, it is probable that we would have had better results.

II. Contracts

The only contract was for chemically treating on the Boone Creek Unit of the Porcupine District. Mr. Dee Humble of Victor, Idaho was awarded this contract. The Project Supervisor and Insect Control Staff Officer checked the quality of the work. It was found that the contractor did a very good job of treating. He was conscientious and cooperative and completed all of the contract requirements satisfactorily. It is recommended that he be allowed to bid on future treating contracts. No difficulties were encountered in the administration of this contract.

III. Safety

An Insect Control Safety Plan was provided in the Forest Master Suppression Plan and each project was covered by an individual plan. Each project supervisor was responsible for safety on his project. The following shows the results of our safety program.

Vehicle miles travelled	-	17,105
Man-hours worked	-	13,677
Lost-time accidents	-	0
First aid cases	-	0
Medical cases (not lost-time)	-	1 *
Vehicle accidents	-	1 *

The contractor did not report any accidents or medical cases.

* Both occurred on Teton Basin District. Other units reported no accidents or medical cases.

IV. Control by Logging

Insect infested trees removed by logging are shown in the following table. Those trees were removed between August 1, 1964 and January 31, 1965. This is an estimate based on infested trees per acre determined by surveys done during the fall of 1964.

Sale	No. of Trees
Howard Creek #15-60	3,875
Taylor Creek #15-13	896
Willow Creek I #15-57	56
Moose Creek #118	2,178
Lyle Springs #15-66	149
Elk Wallow #15-11	2,232
Sheep Creek II	222
Buckhorn Ridge #15-55	1,695
TOTAL:	11,303

V. Finances

A. Allotments and Expenditures Summary

F.Y. 1965:

Total allotted (504) as of 1/31/65	$182,000
Total expenditures to complete spring 1964 project	35,896
Total General Expense assessment	22,083
Total expenditures for survey	18,027
Total fall project expenditures	66,693
Total obligations	1,052
Balance	$ 37,249

This is the total balance remaining for use on all the spring 1965 insect control projects on the Targhee National Forest as of the date of this report.

Supplemental funds were requested from the Regional Forester for completing proposed spring 1965 projects. (See 5200 memorandum to Regional Forester dated 1/14/65.) As of the date of this report, no reply has been received on the forest.

B. ADP Code Summary for Surveys and Fall Insect Control Projects

First Digit

Item	No.	Amount	Acres or Trees	Cost Per Unit
Force Account Treat	1	7,980	2,241 T	$ 3.56
Fell and Burn	2	5,951	448 T	13.28
Contract Payment	3	2,462	546 T	4.50
Spotting	4	11,379	12,462 T	.92
Stringing	5	6,838	12,462 T	.55
Contract Admin.	6	2,138	546 T	3.91
Road Const. and Mtce.	7	1,459		--
Camp Costs	8	2,456		--
Overhead	9	6,803		--
Surveys		19,027	121,460 A	.16
Total		66,693		

Second Digit

Item	No.	Amount
Supplies and Miscellaneous	71	4,089
EDB	72	--
Meals	73	--
Equipment	74	609
Salaries	75	34,233
Travel	76	644
Equipment Rental	77	3,981
Services	78	4,110
Surveys	--	19,027
Totals		66,693

C. Cost Per Tree

Method	No. of Trees	Amount	Cost Per Tree
Contract Chem. Treat	546	$ 2,462	$ 4.50
Force Account and Chemical Treat	2,241	12,762	5.70
Fell and Burn	448	5,951	13.28
	3,235	$21,175	$ 6.54
Logging	11,300	890	.08
Totals	14,535	$22,065	$ 1.51

Forest cost per tree not including trees logged	$ 6.54
Forest cost per tree including trees logged	$ 1.51

Supervisor's office insect control staff, prespotting work, and general expense assessment are not included in the above cost per tree. They will be considered in the cost per tree figures at the end of the project for the entire fiscal year 1965, plus what is done to complete the spring project during July 1965. This cost per tree is merely an indication of costs for our fall and winter treating program. Much of our fall expenditures were spent in preparation for spring work and are not reflected here.

D. Oil and Ethylene Dibromide

There was no need to purchase any EDB for the fall project because a sufficient amount was on hand at the Island Park dump. It was necessary to purchase 7,600 gallons of oil, Insecticide was mixed at a rate of 19 parts of oil to one part of EDB. There were 1 pounds of insecticide for each gallon of concentrate. The following shows use of and balance remaining of insecticide.

Unit	Insecticide Used	Trees Treated	Amount Per Tree
D-2	1,575	359	4.4
D-4	1,795	546	3.3
D-5	6,480	1,882	3.4
Total	9,850	2,787	3.5 average

On Hand

	Island Park	Teton Basin
Mixed Insecticide -	12,360 gal.	3,050 gal.
EDB -	5,100 gal.	--
Oil -	--	400 gal.

VI. Conclusions and Suggestions

A. The greatest difficulty experienced during our fall treating program was poor access and working conditions caused by adverse weather. Most of this could have been avoided had surveys and treating work not been delayed until so late in the season. This delay was entirely due to not receiving the necessary funds in time to take advantage of good fall weather.

Survey funds have been requested for fall 1965. If such is received in July, we will be able to proceed as planned for this item. Since surveys must be completed before treating projects can be initiated, it is difficult to suggest how to avoid delay in receiving funds for

fall suppression work. The only suggestion this reporter can offer is that the Regional Forester be convinced of the need for suppression money by September 1, based on estimates. If sufficient funds are allotted for fall work, delay can be avoided and possible balances carried over and applied on spring suppression projects. It is strongly felt by the Insect Control Officer, Rangers, and others that the fall is an ideal time to accomplish considerable effective bark beetle suppression work. However, if the work is delayed too long, added expense caused by adverse weather makes the costs excessive.

B. Approve no fall and burn projects unless the area to be treated has concentrations of infested trees sufficient to make the project practical. Also, on fall and burn projects, contracting seems to be cheaper than force account. Experience has shown that costs tend to become excessive on force account work of this type due to Forest Service requirements of wages, equipment costs, overhead and other assessments.

C. On January 14 and 15, 1965, the Insect Control Officer made a trip to the Teton Forest to study their methods of operation as far as insect control work was concerned. Three methods of operations were noted which appeared to increase the efficiency and economy of their project. These are noted below:

1. Insect Control Officer was delegated certain line authorities. This resulted in much closer control over the progress and quality of work done on the various projects. It is recommended that this be given consideration for the Targhee Forest. It is felt by this reporter that in several instances money could be saved and work expedited if the Insect Control Officer had the authority to make on-the-ground decisions rather than only recommendations to project supervisors.

2. Increased use of contracting instead of force account work. They are contracting all work such as stringlining, spotting, treating (both chemical and fell and burn). The Targhee infestations are not similar, in several respects to the Teton infestations. However, this method should be considered carefully and used, if at all practical. Much smaller Forest Service crews are required, not nearly the investment is needed in supplies, equipment and vehicular equipment. Also, the need for detailers is much less. Teton costs per tree under this method have proven to be less than where force account crews have been used. Quality has been as good or better in most cases. However, only certain types of infestations can be contracted efficiently. This must be carefully considered before deciding to contract.

3. Fit timber sale program into insect control activities more closely. The Teton is concentrating timber sales on infested areas. Here again, the type of infestation must be considered. However, in smaller, intense infestations, logging can be a very effective

means of control. They have found that if logs are decked in the late fall, the development of the insect is arrested to the point where they will not fly until about September 1. This allows the loggers much more time to remove the logs. Also, the size of clearcuts is allowed to be larger where it is necessary to clean up an infestation. Due to reduced insect control allotments, this may be one method of accomplishing effective control. It is recommended that every effort be made to correlate timber sales into the insect control program wherever possible.

VII. Map Section

Legend

District Boundaries -

Contract Chemical Treatment -

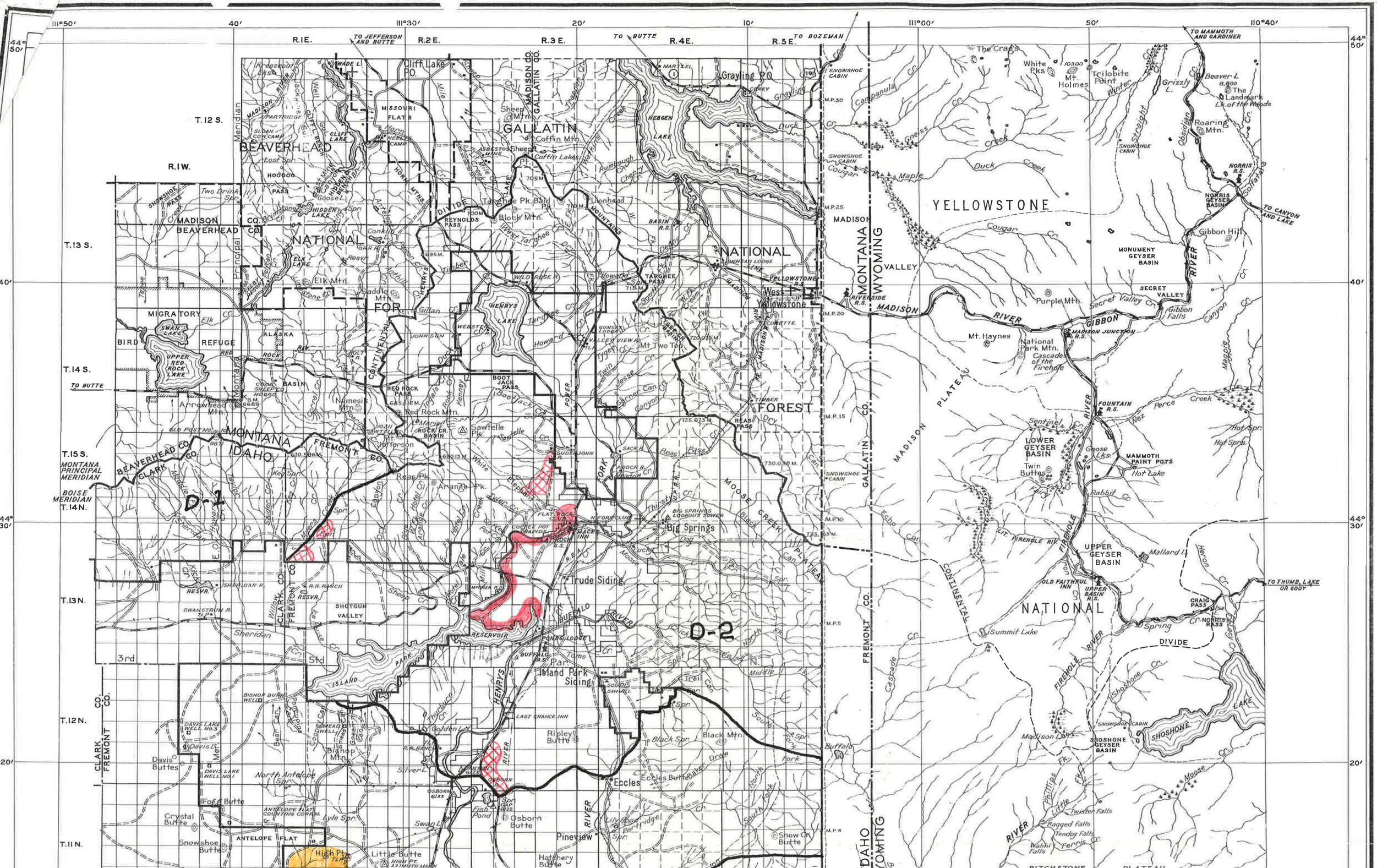
Force Account Chemical Treatment -

Force Account Fall and Burn -

Force Account Prespotting -

Road Cleanup Project -

Jackson Mill Timber Cruise -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T.12 S.
T.13 S.
T.14 S.
T.15 S.
T.11N.
T.12N.
T.13N.
T.14N.
R.1W.
Principal Meridian
MONTANA PRINCIPAL MERIDIAN
BOISE MERIDIAN
TO JEFFERSON AND BUTTE
TO BUTTE
TO BOZEMAN
TO MAMMOTH AND GARDINER
BEAVERHEAD CO.
MADISON CO.
GALLATIN CO.
CLARK CO.
FREMONT CO.
MONTANA
IDAHO
WYOMING
BEAVERHEAD NATIONAL FOR.
GALLATIN NATIONAL FOREST
YELLOWSTONE NATIONAL
MIGRATORY BIRD REFUGE
ALASKA BASIN
ANTELOPE FLAT
SHOTGUN VALLEY
MADISON VALLEY
PLATEAU
CONTINENTAL DIVIDE
D-1
D-2
Cliff Lake P.O.
Grayling P.O.
West Yellowstone
Trude Siding
Island Park Siding
Big Springs
Eccles
Pineview
Ashton
Arrowhead Mtn.
Sheep Mtn.
Coffin Mtn.
Coffin Lakes
Elk Mtn.
Saddle Mtn.
Black Mtn.
Lionhead
Targhee Pk.
Bald Pk.
Red Rock Mtn.
Sawtelle Pk.
Jefferson
Reas Pk.
Arange Pk.
Nemesis Mtn.
Bishop Mtn.
Davis Buttes
Fox Butte
Crystal Butte
Snowshoe Butte
Little Butte
Ripley Butte
Osborn Butte
Snow Ck. Butte
Hatchery Butte
Eccles Butte
Mt. Two Top
Mt. Haynes
National Park Mtn.
Purple Mtn.
Mt. Holmes
Tcilobite Point
Roaring Mtn.
Gibbon Hill
The Landmark
The Crags
Sentinel Cr.
Lower Geyser Basin
Twin Buttes
Mammoth Paint Pots
Upper Geyser Basin
Old Faithful Inn
Madison Junction
Fountain R.S.
Norris R.S.
Norris Geyser Basin
Monument Geyser Basin
Secret Valley
Gibbon Falls
Shoshone Geyser Basin
Shoshone Lake
Craig Pass
Summit Lake
Big Springs Lookout Tower
Jacks Inn
Old Post No. 98
Red Rock Pass
Boot Jack Pass
Reas Pass
Henrys Lake
Hebgen Lake
Duck Creek
Cougar Cr.
Maple Cr.
Gneiss Cr.
Campanula Cr.
Grizzly L.
Beaver L.
Obsidian Cr.
Straight Cr.
Solfatara Cr.
Gibbon River
Madison River
Firehole River
Gallatin River
Henrys Fk.
Snake River
Yellowstone R.
Lt. Firehole R.
Perce Creek
Hot Springs
Rabbit Cr.
Mallard L.
Heron Cr.
Shoshone Cr.
Moose Cr.
Twister Falls
Ragged Falls
Tendoy Falls
Wahni Falls
Ferris Cr.
Phillips Fk.
Little Fk.
Middle Fk.
North Fk.
South Fk.
Buffalo Fk.
Buffalo Reservoir
Island Park Reservoir
Hidden Lake
Elk Lake
Cliff Lake
Swan Lake
Upper Red Rock Lake
Henrys Lake
Hebgen Lake
Duck Lake
Coffin Lakes
Hidden Lake
Goose L.
Grizzly L.
Beaver L.
Lk. of the Woods
Yellowstone Lake
Shoshone Lake
Madison Lake
Mallard L.
Summit Lake
Twin Buttes
Lyle Spr.
Two Drink Spr.
Hot Springs
Old Post No. 98
Old Post No. 99
Ranger Station
Guard Station
Lookout Tower
Campground
Snowshoe Cabin
Cougar
Maple
Duck Creek
Gneiss Cr.
Campanula Cr.
Straight Cr.
Obsidian Cr.
Roaring Mtn.
Norris R.S.
Norris Geyser Basin
Solfatara Cr.
Monument Geyser Basin
Gibbon Hill
Secret Valley
Gibbon Falls
Madison Junction
Purple Mtn.
Mt. Haynes
National Park Mtn.
Cascade of the Firehole
Fountain R.S.
Lower Geyser Basin
Mammoth Paint Pots
Twin Buttes
Upper Geyser Basin
Old Faithful Inn
Craig Pass
Summit Lake
Shoshone Geyser Basin
Shoshone Lake
Madison Lake
Big Springs Lookout Tower
Jacks Inn
Old Post No. 98
Red Rock Pass
Boot Jack Pass
Reas Pass
Henrys Lake
Hebgen Lake
Duck Creek
Cougar Cr.
Maple Cr.
Gneiss Cr.
Campanula Cr.
Grizzly L.
Beaver L.
Obsidian Cr.
Straight Cr.
Solfatara Cr.
Gibbon River
Madison River
Firehole River
Gallatin River
Henrys Fk.
Snake River
Yellowstone R.
Lt. Firehole R.
Perce Creek
Hot Springs
Rabbit Cr.
Mallard L.
Heron Cr.
Shoshone Cr.
Moose Cr.
Twister Falls
Ragged Falls
Tendoy Falls
Wahni Falls
Ferris Cr.
Phillips Fk.
Little Fk.
Middle Fk.
North Fk.
South Fk.
Buffalo Fk.
Buffalo Reservoir
Island Park Reservoir
Hidden Lake
Elk Lake
Cliff Lake
Swan Lake
Upper Red Rock Lake
Henrys Lake
Hebgen Lake
Duck Lake
Coffin Lakes
Hidden Lake
Goose L.
Grizzly L.
Beaver L.
Lk. of the Woods
Yellowstone Lake
Shoshone Lake
Madison Lake
Mallard L.
Summit Lake
Twin Buttes
Lyle Spr.
Two Drink Spr.
Hot Springs
Old Post No. 98
Old Post No. 99
Ranger Station
Guard Station
Lookout Tower
Campground
Snowshoe Cabin

D-3

D-4

D-5

T.10N.
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T.44N.
T.43N.

R.11W.
R.10W.

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Ashton
Marysville
Grainville
Squirrel
Farnum
Drummond
Chester P.O.
France
Lamont
Parker
ST. ANTHONY
Sugar City
Teton
Newdale
Clementsville
Felt P.O.
REXBURG
Moody
Parkinson
Walker
Gale
Jensen
Herbert
Sunnydell
Kruger
Rudy
Tetonia
Driggs
Alta
Warm River
Garrett
Rising Butte
Snake River Butte
Elk Butte
Lookout Butte
Warm River Butte
Little Butte
High Pt.
Split Butte
Hatchery Butte
Moose Butte
Bear Spr.
Cold Spr.
Beaver Pond
Trail Can Spr.
Sheep Falls
Big Falls
Lower Falls
Grand View
Fish Spr.
Rising Butte
Lake Lillypad
Horseshoe L.
Bechler Falls
Cave Falls
Colonnade Falls
Ouzel Falls
Union Falls
Beula L.
Hering L.
Birch Hills
Mountain Proposition
Ash
Creamish Cr.
Spirnes Cr.
Robinson Cr.
Little Robinson
Snowshoe Cabin
Initial Point
Rainbow Falls
Terraced Falls
Bechler River R.S.
Snake River R.S.
Porcupine R.S.
Meadows
Sheep Falls
Trouts Hole
Squirrel Meadows
Jackass Meadow
Coyote Meadows
Grassy Lake Resvr.
Lake of the Woods
Cassadge
Boone
Hominy Pk.
Survey Pk.
Jackson Pk.
Forellen Pk.
Owl Hole
Red Mtn.
Colter Can.
Ranger Pk.
Doane Pk.
Eagles Rest Pk.
Rolling Thunder Mtn.
Snowshoe Can.
Hanging L.
Dry Ridge Mtn.
Bivouac Pk.
Moran Canyon
Green Lake Mtn.
Green Mtn.
Cleaver Pk.
Mt. Moran
Trapper
Bear Paw L.
Thor Pk.
Mystic Isle
Leigh
Leigh L.
Spalding Bay L.
Cascade Can.
Jenny Lake
Rock of Ages
Mt. St. John
Mt. Owen
Grand Teton
Table Mt.
Table Rock
Deke L.
Glacier
South Teton
Garnet Can.
Nez Perce
Avalanche Can.
Buck Mtn.
Static Pk.
Mt. Meek
Mt. Bannon
Fox Cr. Pass
Death
Rimrock
Forget-me-not
Phelps
Elk I.
Antelope Flat
Snowdrift L.
Taggart L.
Bradley L.
Amphitheater L.
Schoolroom Glacier
Static Peak Div.
Two Ocean Pass
Two Ocean Plateau
Pitchstone Plateau
Mt. Norris
Moose Mtn.
Narrows
Indian Meadows
Hidden Corral Basin
Rammel Mtn.
Wister Mtn.
Freds Mtn.
Peterson Glacier
Ricks Basin
Devils Stairs
Rapid Cr. R.S.
Box Scout Camp
Table Mtn.
Stacium Hill
Mt. Meek
Mt. Bannon
Static Pk

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

TARGHEE NATIONAL FOREST

EAST DIVISION

IDAHO AND WYOMING

BOISE AND SIXTH PRINCIPAL MERIDIANS

1955*

SCALE

0 1 2 3 4 5 MILES

LEGEND

- NATIONAL FOREST BOUNDARY
- ADJACENT NATIONAL FOREST BOUNDARY
- MAIN MOTOR HIGHWAY
- GOOD MOTOR ROAD
- POOR MOTOR ROAD
- TRAIL
- RAILROAD
- TELEPHONE LINE
- SUPERVISOR'S HEADQUARTERS
- DISTRICT RANGER STATION
- GUARD OR RANGER STATION NOT PERMANENTLY OCCUPIED
- PERMANENT LOOKOUT STATION
- TRIANGULATION STATION
- TRIANGULATION STATION AND PERMANENT LOOKOUT STATION
- HOUSE, CABIN OR OTHER BUILDING
- MUNICIPAL AIRPORT
- NATIONAL HIGHWAY ROUTE NUMBERS
- STATE HIGHWAY NUMBERS
- AUXILIARY LANDING FIELD
- NATIONAL FOREST LAND

REPORT ALL FIRES TO FOREST SUPERVISOR,
RANGER, GUARD, SHERIFF OR ANY TELEPHONE OPERATOR.

COMPILED AT REGIONAL OFFICE, OGDEN, 1949.
FROM U.S.G.S., BU. LAND MAN. (FORMERLY G.L.O.),
FOREST SERVICE AND OTHER SURVEYS BY
C. SPAUN.
TRACED 1950 BY C. SPAUN.

*REPRINT OF 1950 EDITION.

FOREST SERVICE
MAP CLASS E.

POLYCONIC PROJECTION
1927 NORTH AMERICAN DATUM

LONGITUDE WEST FROM GREENWICH

BOISE MERIDIAN
SIXTH PRINCIPAL MERIDIAN